

# LISTing Newsletter

Newsletter of the Long Island  
Sinclair/Timex Users Group

November 1993 Issue  
NEXT MEETING NOV 14, 1993



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\*\*\*\*\*  
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 LIBR. TOM SKAPINSKI  
 \*\*\*\*\*

PLEASE SEND INQUIRIES TO:

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LISTING  
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 HOLBROOK, N.Y. 11741

COMING EVENTS:

\*\*\*\*\*  
 NOV. 14, 1993 LIST MEETING.

\*\*\*\*\*  
 \*\*SPECIAL NOTICE\*\*  
 \*\*\*\*\*

THE NEXT MEETING WILL BE HELD AT  
 THE ICE CREAM DISPENSARY  
 (HARVEY'S STORE)  
 334 DOGWOOD AVENUE  
 FRANKLIN SQUARE, N.Y.  
 TEL: 516-486-1090

DIRECTIONS: SOUTHERN STATE PKWY  
 TO EXIT 17 NORTH (HEMPSTEAD AVE)  
 GO TO FIRST TRAFFIC LIGHT,  
 LEFT TURN ON TO CORNWALL,  
 NEXT TRAFFIC LIGHT, BEAR RIGHT  
 ON TO DOGWOOD AVENUE. GO 1 MILE  
 TO THE ICE CREAM DISPENSARY, IN  
 A SMALL SHOPPING CENTER ON THE  
 LEFT SIDE OF THE ROAD.

MEETING MINUTES

\*\*\*\*\*  
 REPORTED BY: FRED STERN  
 OCT. 17, 1993

\*\*\*\*\*  
 HARVEY CALLED THE MEETING TO  
 ORDER AT 2:30PM.

WE RECEIVED A RENEWAL FROM LONG  
 TIME MEMBER ISIDORE GOLDSMITH.  
 ISIDORE, WE HEAR HAS NOT BEEN IN  
 GOOD HEALTH. WE ALL WISH HIM  
 WELL AND A SPEEDY RECOVERY.

GET WELL WISHES ALSO GO TO JOE  
 LAPUNZINA, RECOVERING FROM HIS  
 SMASHING VACATION IN ENGLAND.

MAZEL TOV TO HARVEY ON THE BIRTH  
 OF HIS SECOND GRANDSON. THIS  
 MORNING WAS THE BRIS. (THE CER-  
 EMONIAL CIRCUMCISION)

TECHNICAL ROUNDTABLE  
 \*\*\*\*\*

BOB INFORMED US THAT THE PROBLEM  
 WITH HARVEY'S QL WAS CAUSED BY A  
 BAD POWER SUPPLY. BOB WAS NOT  
 ABLE TO OPEN THE CASE SO FRED  
 WILL DRILL OUT THE SCREWS SO BOB  
 CAN INVESTIGATE THE PROBLEM.

HARVEY TOLD US OF A PROBLEM HE  
 WAS HAVING WITH A TS1000 WHICH  
 WAS DONATED TO LIST. FRED WILL  
 TROUBLESHOOT IT AND RETURN IT BE  
 NEXT MEETING.

BOB GILDER ALSO TOLD US OF SOME  
 GOOD BUYES ON DISK DRIVER. BOB  
 WILL SEND ME THE INFORMATION FOR  
 PUBLICATION IN LISTING.  
 (SEE PAGE 3)

BOB ALSO TOLD US THAT EDLIE ELEC-  
 TRONICS, HEMPSTEAD TURNPIKE,  
 LEVITOWN N.Y. HAS 5.25 INCH,  
 360K/720K USED DISK OF VERY GOOD  
 QUALITY, \$7.50 FOR 50.

CLASSIFIEDS

\*\*\*\*\*  
 THIS CLASSIFIED SECTION IS  
 AVAILABLE TO ALL LIST MEMBERS  
 FREE OF CHARGE.  
 THE ONLY RESTRICTION IS THAT  
 IT IS TO BE USED ONLY FOR THE  
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 COMPUTER EQUIPMENT, PERIPHERALS  
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 LISTING, LIST, AND ITS OFFICERS  
 DO NOT ENDORSE, WARRANTY, OR  
 GUARANTEE ANY OF THE ITEMS  
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 SECTION

\*\*\*\*\*  
 THE FOLLOWING PUBLICATIONS ARE  
 AVAILABLE ONLY THROUGH LIST:

ZX-81/TS1000 TECHNICAL TIDBITS  
 TECHNICAL TIDBITS PART II  
 SAVINGS AND LOAD OF THE TIMEX  
 COMPUTER  
 \$4.00 EACH.

I NEED THE DOCUMENTATION FOR THE  
 FOLLOWING PROGRAMS USED ON THE  
 TS1000:  
 MINI-MOD 1.5  
 Z-COMM  
 FREDERIC STERN, LISTING EDITOR.

A FINAL WORD

\*\*\*\*\*  
 MY NAME IS FRED STERN AND I AM  
 THE EDITOR OF THIS EDITION OF  
 LISTING.

THIS MONTH WE BRING YOU INTERET-  
 ING ARTICLES FROM ZXIR OLIVE  
 ALIVE AND T.S. BULLETIME.

SPECIAL THANKS GO TO BOB GILDER,  
 TOM SKAPINSKI AND DONALD LAMBERT  
 FOR THEIR CONTRIBUTIONS.

A VERY SPECIAL THANK YOU TO  
 HARVEY FOR HIS HOSPITALITY, AND  
 THE USE OF HIS STORE FOR OUR  
 MEETING. ALSO TO MIKEY FOR HIS  
 CONTRIBUTIONS.

SEE YOU ALL AT THE NEXT MEETING.



October 19th 1993

Fred Stern  
214 Roberts Street,  
Holbrook, NY 11741

GOOD NEWS



Hi Fred,

I couldn't locate the address for JD Hannam CO; However, I have their toll free telephone number: 800-228-0308. They are located in California and provide excellent service. I searched for my bills from JD Hannam CO which had their address on them, but I could not find them.

It may be a good idea if you telephone them and verify the prices I had quoted at our last LIST meeting.

TEAC FD235J 3653 3.5" ED drive @ \$75.00

TEAC 3.5", 720K, DSDD drive @ \$25.00

They come with beige face plates, however a black face plate can be exchanged for a \$2.00 exchange charge.

5.25" complete mounting kit for all 3.5" drives @ \$6.00.

In the latest issue of Nuts N' Volts, ALLTECH Electronics Co., Telephone: 800-995-7773, have the following 'Good Buys':

External Floppy Drive Case with power supply for two half-height drives or one full-height drive, \$19.00.

Surplus/Bulk floppy disks: 5.25" DSDD disks (usually format 720K), 100 disks for \$12.00.

3.5" DSDD 720K, 50 disks for \$14.50, 10 disks for \$3.90.

The disks may have been programmed disks, however, I am not sure!

They have three locations:

1300 East Edinger, Unit D, Santa Ana, CA 92705: Tel 714-543-5011

2018 West Lomita Blvd., Lomita CA 90717: Tel 213-539-2260

602 Garrison Street, Oceanside, CA: Tel 619-721-7733

I do not know which location will ring for the toll free 800 number stated above. I have had purchased items from them in the past and they do advertise monthly in Nuts N' Volts mag and are reliable!

Regards

Bob Gilder

## QL CORNER

DJTOOLKIT REVIEW

Author: Norman Dunbar

Reviewed by Bob Gilder

I became interested in the DJToolkit after browsing through the Dilwyn Jones Computing ads in the last issue of IQLR. It was as though the author of this software had me in mind - the toolkit was totally compatible with the QLiberator compiler. Turbo and Supercharge can also benefit from the DJToolkit, with the exception of one command, DEV\_NAME. This function tends to modify its parameters as well as returning a string.

The DJToolkit is very easy to use, provides 44 useful extensions and is extremely powerful. The Toolkit is less than 4 Kbytes long. There are several versions of the Toolkit: DJToolkit\_BIN which is booted into the reserved memory area, DJToolkit\_rom is a file that can be burned onto a 27128, 16 K eeprom and DJToolkit\_rpm for those users who may wish to add their own header with Liberation Software's Resident Program Manager software (RPM). A lot of thought went into this software package to benefit a wide variety of the software user's requirements.

A 20 page manual accompanies the disk, providing a brief description of the new commands as well as detailed description for each of the new functions and procedures. Quite a few SuperBASIC listings are provided in the detailed section of the manual, that can be used as demonstrations for some of the toolkit extensions.

Updates\_doc is an extension of the DJToolkit Manual. This document provides latest updates that were added to the toolkit, but were added too late for insertion into the manual.

The Toolkit areas covered include screen handling, file handling, file and date extensions, environment functions (free memory, pointer environment detection, check if given SuperBASIC extensions are present, check if level 2 device drivers are present), common heap extensions, font handling extensions, file headers, memory block move and search functions and general programming aids such as system variable address function, screen base address function, display width function for dealing with new graphics hardware and so on.

Outlined below is a brief description of the new procedures and functions as outlined in the manual:

ABS_POSITION	Set file position absolute.
BYTES_FREE	How much free memory is left, in bytes.
CHECK	Test to see if machine code PROC/FN exists.
DEV_NAME	Scan the Directory Device list, returning next name.
DISPLAY_WIDTH	How many bytes used to hold one screen line?
DJTK_VERS	Return the toolkit version number as a string.
FETCH_BYTES	Get some bytes from a channel.
FILE_BACKUP	Get some backup date for a specific file.
FILE_DATASPACE	Get the file's dataspace.
FILE_LENGTH	Get the file's length.
FILE_POSITION	Get the current position in the file.
FILE_TYPE	Get the file's type.
FILE_UPDATE	Get the file's update date.
FLUSH_CHANNEL	Flush the data on a channel to a device.
GET_BYTE	Fetch one byte from a channel.
GET_FLOAT	Fetch 6 bytes from a channel.
GET_LONG	Fetch 4 bytes from a channel.
GET_STRING	Fetch a QDOS string from a channel.
GET_WORD	Fetch 2 bytes from a channel.
KBYTES_FREE	How much free memory is left in Kbytes.
LEVEL2	Test whether level 2 drivers are present on a channel.
MOVE_MEM	Move memory around.

There are two very important files included on the disk; DEMOS\_bas and DEMOS\_doc. DEMOS\_bas is a 37K SuperBASIC file chocked full of useful procedures and functions using a variety of the DJToolkit extensions. DEMOS\_doc supports it's SuperBASIC counterpart as it provides detailed instructions for use of each procedure and function in the order that they are programmed.

For owners of the QLOAD utility, the file DEMOS\_sav can be loaded with the QLOAD command.

I would strongly advise the new user to print out the DEMOS\_doc file for use with DEMOS\_bas or use a multi-tasking front end, activate Quill, load in the DEMOS\_doc file, CTRL-C into basic and load in the DEMOS\_bas file. List the file and CTRL-C back and forth for instructions and operation.

Incidentally, all of those procedures and functions supplied on DEMOS\_bas can be extracted and used within other programs. I extracted one 8-line procedure called 'AUTO\_REPEAT' which uses the SYSTEM\_VARIABLES function. I have an external Schoen Keyboard interface which suffers from keyboard 'roll-over' or repeat characters. Several different remedies have been tried throughout the years with out a correction for this problem. AUTO\_REPEAT did the job! For me - the DJToolkit was well worth the purchase price of £10 for correcting this nagging problem.

There are many more useful routines within DEMOS\_bas. Some of my favorites are: SLIDE\_SHOW for viewing a number of screen dumps, FILE\_DETAILS and DRIVE\_DETAILS, MAKE\_DIRECTORY for Level2 sub-directories, FIND\_FILE lists the filename of files containing a user input string on the screen and a short extract of the file on either side of the string that was found. I'm sure that the many other routines nested in this program that would suit every QL user.

Four fonts are provided for use with the USE\_FONT procedure. This procedure allows the user to change the standard QL character set within any channel. Fonts from Digital Precision's Lightning and Dilwyn Jones Computing Page Designer can also be loaded and used.

The DJToolkit is compatible with Toolkit2. Activating TK2\_ext and typing 'EXTRAS' will reveal the DJToolkit commands nested within the other functions and procedures.

The author of DJToolkit allows any legal owner of this toolkit to include it in QLiberator compiled programs even if you intend to sell commercially or give it away as public domain software or as shareware, by linking it to the program.

The software package is available on disk or microdrive cartridge and will operate on an unexpanded QL.

The author, Norman Dumbar and Dilwyn Jones have made this software package 'idiot-proof', it is that easy to use. The whole software package; the Toolkit and its supporting documentation and demo program and SuperBASIC listings make the use of DJToolkit very easy, even for a novice QL user. Most software manufacturers seem to prepare their supporting documentation for users at their own level, forgetting that, perhaps, there are QL users out there that require simple step-by-step instructions just to get a 'grip' on it. It's obvious that the team of Norman Dumbar and Dilwyn Jones really understand this problem empathizing with the vast majority of software users.

The DJToolkit is powerful, easy to get going and a steal at £10.00. Buy it! You won't regret this purchase.

The DJToolkit is available from: Dilwyn Jones Computing, 41 BRO EMRYS, TAL-Y-BONT, BANGOR, GWYNEDD, LL57 3YT, Great Britain Tel: 0284-354023



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## ARTICLES

SPDOS or yet another T/S 2068 disk DOS.

By Donald S. Lambert.

Way back when there was a disk interface for the T/S 2068 called Ramex Millenia K. See UPDATE for January 1988 page 8. SPDOS was originally marketed by WATFORD ELECTRONICS as a disk interface and operating system. KEPSTON later marketed a version which used a smaller amount of RAM, approx. 700 bytes (WATFORD used about 8K). A variant of the SPDOS interface was marketed in North America by Ramex International, LTD and known as the MILLENIA K. The SPDOS presently being marketed by the CUYAHOGA VALLEY SOFTWARE WORKS is a modification of SPDOS for the 2068 running on Oliger hardware. It is sold under license from ABBEYDALE DESIGNERS LTD, who wrote SPDOS.

It is still available from CUYAHOGA VALLEY SOFTWARE WORKS; 615 SCHOOL AVE.; CUYAHOGA FALLS, OHIO 44221 for \$24.95 plus \$1.50 postage. Currently it is available through CVSW only on 80 track 5.25 disks but I could help make it available on 40 track 5.25 disks. The package will consist of two disks and a 30 page manual.

The first disk is just a few files and it converts the Oliger disk system to accept SPDOS. Then you place the SPDOS boot disk in the first drive and press enter and there is the SPDOS screen and you are ready to work with SPDOS. While the Larken and the Oliger number the disks 0, 1, 2, and 3; SPDOS numbers the drives 1, 2, 3, and 4. And you have to use drive 1 (SPDOS #1 not Oliger #1) for the boot disk. In fact there are

many things that require that drive to have the SPDOS boot disk in drive 1. The commands are very similar to Larken except that you can only use PRINT #4:command: X.X.

The main differences that you will find are that this is a RAM based DOS and it is in memory from 58500 thru 63500. It supports sequential files and also program overlays.

One main difference in the DOS is that SPDOS FORMATS a track to ten 512 sectors and the minimum SAVE to disk is 1K. Then there is a maximum of 144 files to a disk and if the disk is not a data disk the first 15K is not useable for SAVEing a file to since it will have the BOOT program there.

The only problem I had with SPDOS was in copying the disks using MOVE. The manual gave the following:

```
PRINT #4: MOVE "", "": PRINT d1,d2
```

but when I tried it I got ERROR messages mostly var not found.

I messed around and tried this and that with more ERROR messages. I finally called Thomas Simon and he looked it up in the manual and aha! this is what I was supposed to have used:

```
PRINT #4: MOVE "", "": PRINT 1,2
           or whatever drives you are
           copying from and to.
```

It worked, and when I asked Frank Davis about it he said he had the same problem.

To FORMAT a disk you can either use the FORMAT that is in the SYSCOPY program or use the following:

PRINT #4: FORMAT "disk name":  
 PRINT (number of the drive to be  
 formatted 1-4), (the number of  
 tracks of that drive 35, 40,  
 80), (the number of sides on the  
 drive 1 or 2), (and the stepping  
 rate 1-4 with 1=6MS, 2=12MS,  
 3=20MS, 4=30MS)

I have a version of MSCRIPT that  
 works with SPDOS but it has had  
 the memory shortened so that it  
 has about 2 1/2 pages of text or  
 ROOM in memory 9627. But it  
 works.

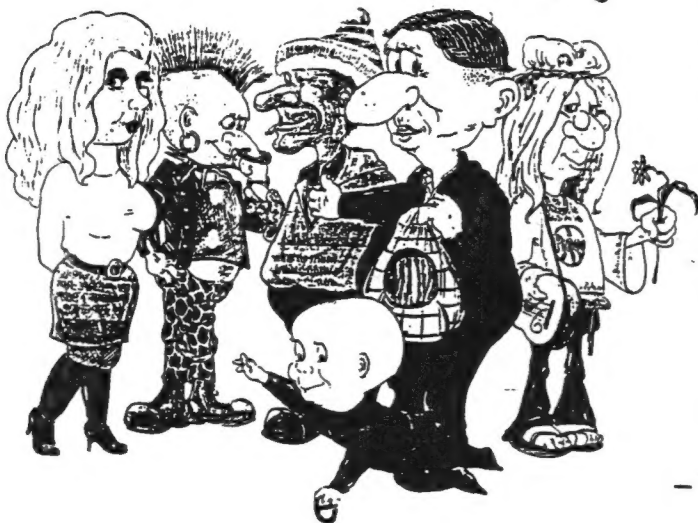
And now I have a copy of TASWORD  
 that works with SPDOS. But it  
 does have a limited file size.

And my thoughts about SPDOS is  
 that while it works it is not  
 friendly like either the Larken  
 or the Oliger DOS in that it is  
 software only and it uses up 11K  
 of memory. I now know what the  
 MSDOS users go through. First  
 you load the software that  
 prepares the Oliger for SPDOS  
 and then you LOAD SPDOS. And  
 SPDOS is not bashfull about  
 reporting an error code which  
 you seldom see with either the  
 Larken or the Oliger. It is a  
 joy to use a real user friendly  
 disk operating system.

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

## Meet the Gang!

At the Next LIST Meeting



### TS1000 TECHNICAL TIDBITS BY FREDERIC STERN

Despite the rumors of its demise, the  
 TS1000 is not dead.  
 There are still hundreds if not thousands  
 still in use today in the U.S.A.  
 The problem is many users are not aware of  
 the various T/S users groups around the  
 country that still support the machine.  
 Also there are many user groups that do  
 not have a monthly newsletter such as this  
 to advise there membership what is going  
 on in the T/S community.  
 Below is a list of active T/S user groups  
 that support the TS1000 and TS2068  
 computers in the U.S.A. and Canada.

\*\*\*\*\*

(1) L.I.S.T.  
 MR. HARVEY RAIT  
 5 PERI LANE  
 VALLEY STREAM, N.Y. 11581

(2) T/S.N.U.G.  
 MR. DONALD LAMBERT  
 1301 KIBLINGER PLACE  
 AUBURN, IN. 46706-3010

(3) C.A.T.U.G.  
 MR. BOB SWOGER  
 613 PARKSIDE CIRCLE  
 STREAMWOOD, ILL. 60107-1647

(4) C.C.A.T.S.  
 MR. ROD GOWEN  
 14784 QUAIL GROVE CIRCLE  
 OREGON CITY, OR. 97045

(5) U.S.U.G.  
 MR. ROD HUMPHREY  
 10984 COLLINS PLACE  
 DELTA B.C. V4C7E6  
 CANADA

(6) O.Z.X.  
 K5XY  
 2025 O'DONNELL DRIVE  
 LAS CRUCES, N.M. 88001



### FARCUS



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WAIGLASS/COULTHART 10-7

"It must have been a power surge."

Bug Reports And Other ZX-TS Ponderings

When you are a beginner or just a creative hobbyist trying to delve deeper into how computers work, you can easily get fooled by believing that since an expert produced the book, it cannot be wrong if something does not make sense. Well experts cannot be experts in everything and they can make mistakes. Witness a magazine article, some technical books by professors and a book on OS/2 which got some basic facts wrong to count about a dozen errors this writer has found recently in print. For the Sinclair enthusiast, here are a few more of interest

old ZX-81 manual, p.184 (not in newer TS manual) code 135 is ☐ not ☒ in the ZX-81 LDOS disk manual sort is 14480 and CLINE is 12316 or should. old ZX-81, 2 volume version of Dr.Logan's ROM disassembly there are a number of misprints in addresses, so before calling one in a m/c call routine, look at the previous and next address to see if it makes sense (as in p.2, both FP-CALC and the END-CALC following are given the same ROM address 0028 hex, while the second should be 002B). All m/c addresses of any book are suspect!

Not to be outdone, our LDOS Unofficial Technical Manual has included a few (this is a ZX-81/TS1000 only book), in the different versions that have come out. Even some very early versions of the simple instructions on using the system for beginners, contained some mistaken advice, that was pointed out to me by early reviewers. Also, picking up reports that subway train motors can erase disks was a mistake that was pointed out, the story possibly originating as an imaginative excuse to someone's boss to explain why the work to be done at home was not on the boss' desk the next morning. One of those urban myths perhaps. A specific error in the section on converting commercial programs (page 3-4 in some versions) quoted SAVE CHR\$... instead of LOAD CHR\$ 832"" as the way to get an unbreakable program to break, the break key halting it when it pauses after loading before going into a save. Another mistake was in saying that you could PEEK to CLINE after an operation to get the file name last saved under, when in fact this is partially overwritten with temporary data during the course of disk access. This publishing hobby can certainly keep one sharp.

Then there are problems in the ZX-81/TS1000 itself. The occasional error with floating point divide is fairly well known, but some early ROM versions will make other mistakes like giving 1.359 for PRINT SQR 0.25, when everyone knows the square root of 1/4 should be something like 0.5 ( $\frac{1}{2}$  times  $\frac{1}{2}$  =  $\frac{1}{4}$ ). It seems that Sir Clive Sinclair was an enthusiast for finding new, smaller m/c programs for getting math functions, having been able to squeeze some scientific functions into the small ROM of a pocket calculator, in a way people thought could not be done, and doing it in record time from a motel room in the USA near the chip manufacturer's plant, that was waiting to start production. The most obvious mistake in the ZX-81/TS1000 ROM is the CLS going nuts when used after some scrolling, in certain situations. However the Sinclairs were not the only computer to have some software bugs, as MS DOS in versions below 2 and the BASICA that goes with it had enough bugs that owners were advised to upgrade to version 2 in the early days of the IBM PC. One can probably consider oneself lucky if one only makes a few errors in a project as exacting as computer work. The Coleco Adam computer for example has had its BASIC fixed extensively by local amateurs working out of the user groups. One problem it once had, is forgetting which parts saved on a cartridge or disk belong to the latest or an older, deleted version of an essay or text, to lose the whole thing as a result, not a nice thing when you are working to a deadline. (And would the teacher believe you if you said it was all finished, but the computer lost it? Maybe he would take the subway motor erased it story as more believable afterall.)

Finally, in the last issue (TS Bulletin #2-92) an indexed sorting routine was listed for educational purposes. It occurred to me that RAM could easily be saved by replacing the array N(X), DIM N(NE) of numbers with the string array N\$(X), so that DIM N\$(NE,1) would save 4 bytes per element (record, in the data-base). This would limit records to about 253 and the comparisons etc. would have to be changed to IF OP AND I\$(CODE(N\$(X)))(3 TO 23)<=I\$(CODE(N\$(Y)))(3 TO 23) THEN GOTO 225 from 202 IF OP=1 AND I\$(N(X))(3 TO 23)<=I\$(N(Y))(3 TO 23) THEN GOTO 225, and similar changes to the other comparisons, etc. and switch routines at 210 and 280. 110 also becomes 110 LET N\$(Z)=CHR\$ Z etc.

So look out for our little friend the computer bug; he is everywhere! *AT*



MOVIN

ON



## SPECTRUM FILE - T32066



```

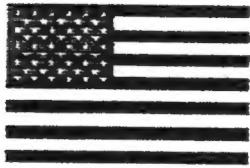
2 REM © WAEL SABBAGH
3 DIM A$(30,8,20)
4 LET FCF=1
10 BORDER 1: PAPER 1: INK 6: C
LS
15 POKE 23658,8
20 PRINT AT 0,8; FLASH 1;"FIL
E"
25 PRINT AT 11,3;"BY WAEL SABB
AGH"
40 INPUT "SECRET CODE TO ENTER
TO FILES";B$
50 IF B$<>"PMP" THEN BEEP .3,-
10: GO TO 40
60 CLS
70 BEEP .1,10
80 PRINT AT 0,10;"MENU"
90 PRINT
100 PRINT "1 TO OPEN A NEW FILE
105 PRINT
110 PRINT "2 TO LOOK AT A CERTA
IN FILE"
115 PRINT
120 PRINT "3 TO HAVE A LOOK AT
EACH FILE (ON LY FILE CODE AND N
AME) AT THE SAME TIME"
125 PRINT
130 PRINT "4 SAVE FILES ON TAPE
135 PRINT
140 PRINT "5 LPRINT A FILE ON T
HE PRINTER"
145 PRINT
150 PRINT "6 SEARCH THROUGH ALL
FILES"
155 PRINT
160 PRINT "7 CHANGE INFORMATION
FROM FILE"
175 PRINT : PRINT "8 STOP"
180 INPUT "CHOICE PLEASE (1/8)"
C
190 IF C=1 THEN GO TO 300
200 IF C=2 THEN GO TO 500
210 IF C=3 THEN GO TO 1000
220 IF C=4 THEN GO TO 1100
230 IF C=5 THEN GO TO 1500
240 IF C=6 THEN GO TO 2000
250 IF C=7 THEN GO TO 2500
260 IF C=8 THEN GO TO 3000
270 GO TO 180
300 DATA "FILE CODE ","NAME ","
ADDRESS ","TOWN ","COUNTRY ","PO
STCODE ","TELEPHONE ","OTHER INF
O"
310 CLS : RESTORE 300
315 IF FCF>30 THEN BEEP .1,4: P
RINT "NO PLACE FOR DATA": GO
TO 410
317 LET A$(FCF,1)=STR$ FCF
320 PRINT AT 0,8;"NEW FILE ENTR
Y"
330 PRINT : READ B$: PRINT B$;F
CF
340 FOR X=2 TO 8: READ B$
350 INPUT (B$);A$(FCF,X)
360 IF LEN A$(FCF,X)>20 THEN GO
TO 350
370 PRINT B$;A$(FCF,X)
380 BEEP .2,X*5
390 PRINT
400 NEXT X
405 LET FCF=FCF+1
410 PRINT FLASH 1;"PRESS ANY KE
Y TO GO TO MENU"
420 IF INKEY$="" THEN GO TO 420
430 GO TO 60
500 CLS

```

```

510 PRINT AT 0,7;"FILE DISPLAY"
: PRINT
530 PRINT "HIT 1 IF YOU KNOW TH
E FILE CODE"
535 PRINT : PRINT "HIT 2 IF YOU
KNOW NAME (NOT ADVISBLE)"
536 PRINT : PRINT "HIT 3 IF YOU
KNOW TEL (NOT ADVISBLE)"
537 PRINT : PRINT "HIT 4 TO MEN
U"
540 IF INKEY$="" THEN GO TO 540
550 IF INKEY$="1" THEN INPUT "F
ILE CODE ";F: LET U=1: GO TO 700
560 IF INKEY$="2" THEN INPUT "N
AME PLEASE ";F$: LET U=2: GO TO
575
570 IF INKEY$="3" THEN INPUT "T
EL PLEASE ";F$: LET U=7: GO TO 5
75
571 IF INKEY$="4" THEN GO TO 60
572 GO TO 540
575 FOR X=LEN F$+1 TO 20: LET F
$=F$+" ": NEXT X
580 FOR X=1 TO FCF: IF A$(X,U)=
F$ THEN LET F=X: GO TO 700
590 NEXT X
595 CLS
600 PRINT "NAME / TEL NOT IN FI
LE"
610 GO TO 520
700 RESTORE 300: CLS
710 READ B$: PRINT B$;F
720 FOR X=2 TO 8
730 PRINT
740 READ B$: PRINT INK 6;B$;: B
EEP .02,X*2: PRINT INK 7;A$(F,X)
: BEEP .02,X*3
750 NEXT X
760 PRINT
770 GO TO 410
1000 CLS
1005 PRINT FLASH 1;"NAME","FILEC
ODE"
1010 FOR X=1 TO FCF
1020 PRINT A$(X,2);" ";A$(X,1) (
TO 3)
1030 NEXT X
1040 GO TO 410
1055 BEEP .03,X
1100 CLS
1110 PRINT AT 0,5;"SAVE FILE ON
TAPE"
1120 PRINT : PRINT
1130 PRINT "INSERT BLANK TAPE"
1140 PRINT "THEN PRESS ANY KEY"
1150 IF INKEY$="" THEN GO TO 115
0
1160 SAVE "FILE" LINE 10
1170 BEEP .3,-10
1180 PRINT
1190 PRINT "REWIND TAPE TO VERIF
Y"
1200 PRINT "THEN PRESS ANY KEY"
1210 IF INKEY$="" THEN GO TO 121
0
1220 VERIFY "FILE"
1230 GO TO 410
1500 CLS : PRINT AT 0,4;"PRINTER
DISPLAY"
1520 PRINT : PRINT FLASH 1;"IF Y
OU ARE NOT SURE OF FILE CODE THE
N USE OPTION 3 (ON MENU) TO FIND
OUT"
1540 PRINT : PRINT "PRESS P TO P
RINT FILE ON PRINTER"
1550 PRINT "PRESS M TO GO TO MEN
U"

```

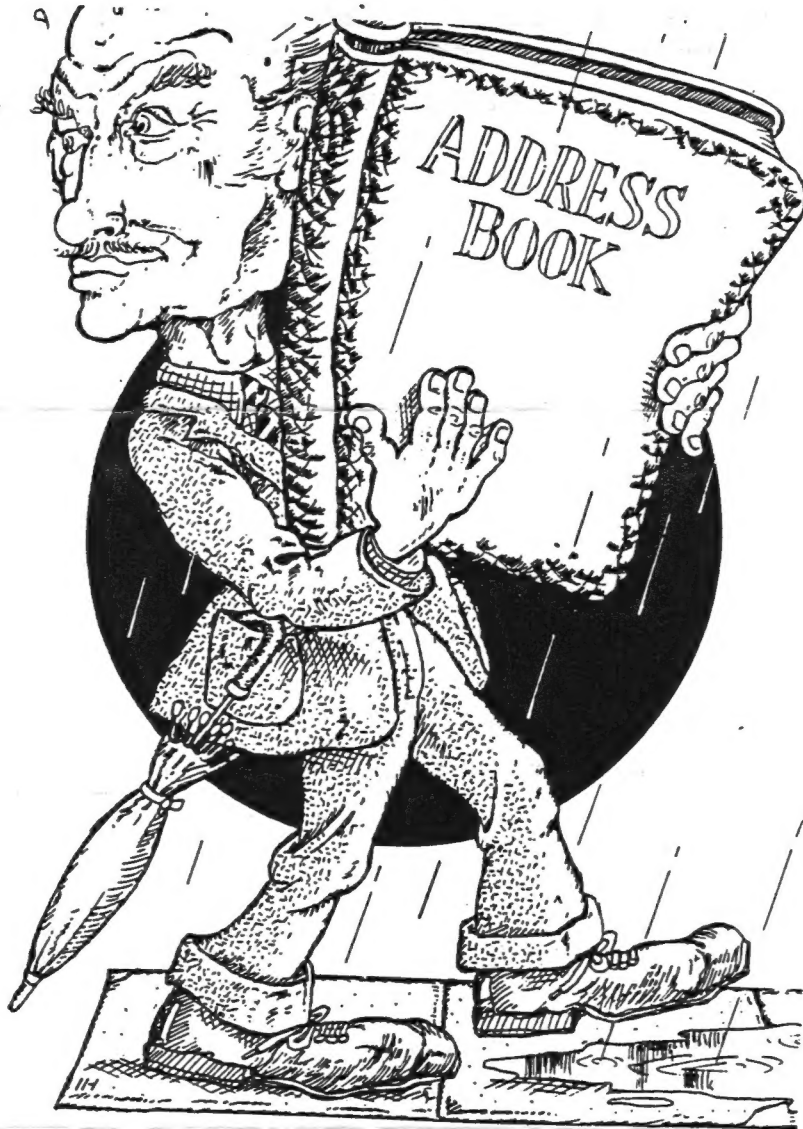


A VERY USEFUL routine for the 16K Spectrum has been sent by Wael Sabbagh of Colchester. Spectrum File provides a method of storing the names and addresses of up to 30 individuals. Only 20 characters can be handled on each line of input but that should be no disadvantage, except perhaps on the Other Information line.

Since some of the information in the file may be confidential, the files can be accessed only when the secret code has been entered. STOP and LIST commands would allow the Sinclair user to crack that deadlock quickly. The code as listed is PMP but can be altered in line 50. The routine is served by a very useful menu.

As with all filing routines, the user is well-advised to avoid RUN commands. If the program is broken into, then GO TO 60 will return you safely to the menu.

On a 48K machine, the routine will handle details on 150 individuals provided the number 30 in lines 3, 315, 1590 and 2520 is altered to 160. If the program is to be saved, option 4 of the menu should be used.



```
1560 IF INKEY$("<")="P" AND INKEY$(">")
    "M" THEN GO TO 1560
1570 IF INKEY$="M" THEN GO TO 41
0
1580 INPUT "ENTER FILE CODE ";F
1590 IF F<1 OR F>30 THEN GO TO 1
580
1600 RESTORE 300: LPRINT "$ABBAG
H SOFTWARE FILE PROG"
1610 LPRINT
1620 FOR X=1 TO 8
1630 READ K$: LPRINT K$;A$(F,X)
1640 LPRINT
1650 NEXT X
1660 LPRINT "
```

```
1670 GO TO 60
2000 CLS
2010 FOR X=1 TO FCF-1
2020 RESTORE 300
2030 FOR K=1 TO 8
2040 READ B$
2050 PRINT B$;A$(X,K)
2060 PRINT : NEXT K
2100 PRINT FLASH 1;"PRESS ANY KE
Y TO CON (M TO MENU)"
```

```
2110 IF INKEY$="" THEN GO TO 211
0
2120 IF INKEY$="M" THEN GO TO 60
2130 CLS : NEXT X
2140 GO TO 410
2500 RESTORE 300: CLS
2510 INPUT "WHAT FILE WOULD YOU
LIKE TO CHANGE INFO FROM ";F
2520 IF F<1 OR F>30 THEN GO TO 2
510
2530 PRINT FLASH 1;"WHAT WOULD Y
OU LIKE TO CHANGE";
2540 PRINT "INPUT 9 TO GO TO MEN
U"
2550 FOR C=1 TO 8
2555 READ B$
2560 PRINT FLASH 1,C; FLASH 0;B$
;A$(F,C)
2570 NEXT C
2580 INPUT "CHANGE (9 TO MENU)";
D
2590 IF D=9 THEN GO TO 60
2600 INPUT "THE NEW VERSION";A$(
F,D)
2610 CLS : RESTORE 300: GO TO 25
30
3000 CLS : PRINT AT 10,4; FLASH
1;"FILE CLOSED"
```